



An Introduction to:-

Freeview

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Freeview

- **Digital Television via your aerial**
- **A BBC/CrownCastle/BSkyB joint venture replacing ITV Digital.**
- **No subs! - Just needs a DTV Adapter or an iDTV**
- **Will be the only TV after Analogue shutdown in 2010+**
- **Channels are transmitted in Multiplexes, interleaved between existing Analogue TV**

Analogue: 5 Channels (A few sub carriers AM, FM, PM)

**Freeview: 6 Multichannel Multiplexes
(1705 subcarriers/COFDM - 18 or 24 Mb/s)**



What Do you get ?



S4C, S4C2 - available in Wales

KIDS



SPECIAL INTEREST



What You Don't Get:-

Bills, Premium Sport/Movies

ENTERTAINMENT



DOCUMENTARIES



SHOPPING AND TRAVEL



MUSIC



NEWS



RADIO





Main Video Channels

Mux-1

BBC-1

BBC-2

BBC-3/CBBC

BBC-News24

Mux-2

ITV-1

ITV-2

ITV News

Ch4

*4-Xtra**

tbd

Mux-A

five (Ch5)

QVC

TV Travel Shop

bid-up.tv

*tbd x2**

BBC Radio1-4

** Not on air yet*

Mux-B

BBC-4/CBeebies

BBCi Video(701/2)

BBC Parliament

Community

BBC Radio

Mux-C

UK History

Sky News

Sky Sports News

Sky Travel

More Radio ?

Mux-D

TMF

The Hits

FTN / UKBrightIdeas

*tba (Boomerang/CNN/TCM ?)**

Commercial Radio



Radio/Data Channels

DIGITAL RADIO (similar to DAB, but often higher bit rate)

BBC:

Radio1-4, 1Xtra, 5-Live, 5-Live Sports Xtra,
6-Music, BBC-7, BBC Asian Network

Commercial:

BBC World Service, Smash Hits, Kiss, Kerrang!, JazzFM, OneWord

DATA - Hi-Res Webpage-like Text/Interactivity (courtesy of MHEG)

BBCi Text/Video

Teletext Ltd, FourText, NTL

**NOTE: Radio/MHEG Data that can test your Box and its firmware !
- along with BBC Parliament**



Tx Frequencies/Powers

Operator Mux Mode	BBC		ITV/C4		C5/SDN		BBC		Crown (Sky)		Crown	
	Mux-1		Mux-2		Mux-A		Mux-B		Mux-C		Mux-D	
	16QAM		64QAM		64QAM		16QAM		16QAM		16QAM	
Transmitting Station	Ch	ERP (kW)	Ch	ERP (kW)	Ch	ERP (kW)	Ch	ERP (kW)	Ch	ERP (kW)	Ch	ERP (kW)
Crystal Palace	25	20	22	20	32	20	28	20	34	20	29	20
Sudbury	49	7	68	8.1	48	5	39	7.5	54	1.5	50	1.1
Sudbury B			56	1.1								
<u>Analogue</u>	<u>BBC-1</u>	<u>BBC-2</u>	<u>ITV-1</u>	<u>C-4</u>	<u>five</u>				<u>Power</u>			
London	26	33	23	30	37				1MW			
Sudbury	51	44	41	47	35				250kW (except five)			

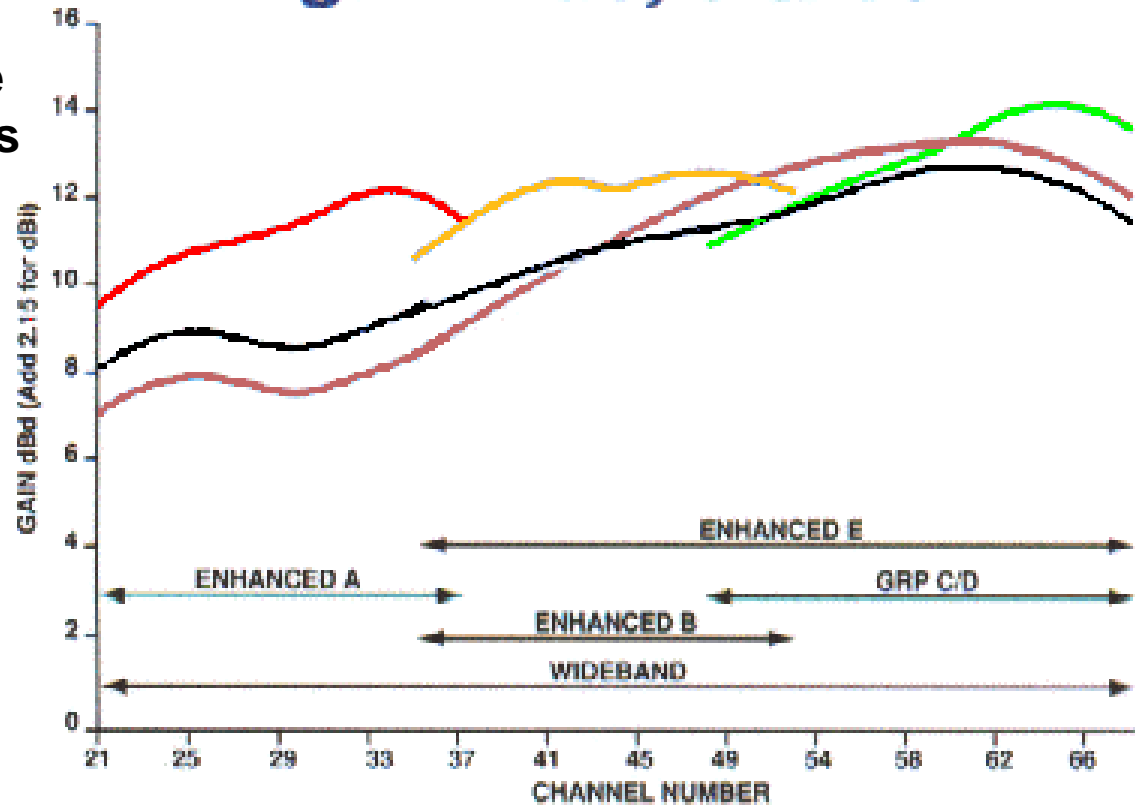
- **Note-1: Power levels not directly comparable, but Frequencies can be an issue**
- **Note-2: Some parts of Essex can also receive Bluebell Hill in Kent**



Aerial Groups

Extragain XG8, 9 & 10

Antiference
Aerial Gains
dBd



TV Aerial Groups:-

A: 21-37 Red

B: 35-53 Yellow

C/D: 48-68 Green

E: 35-68 Brown

K: 21-48 Grey

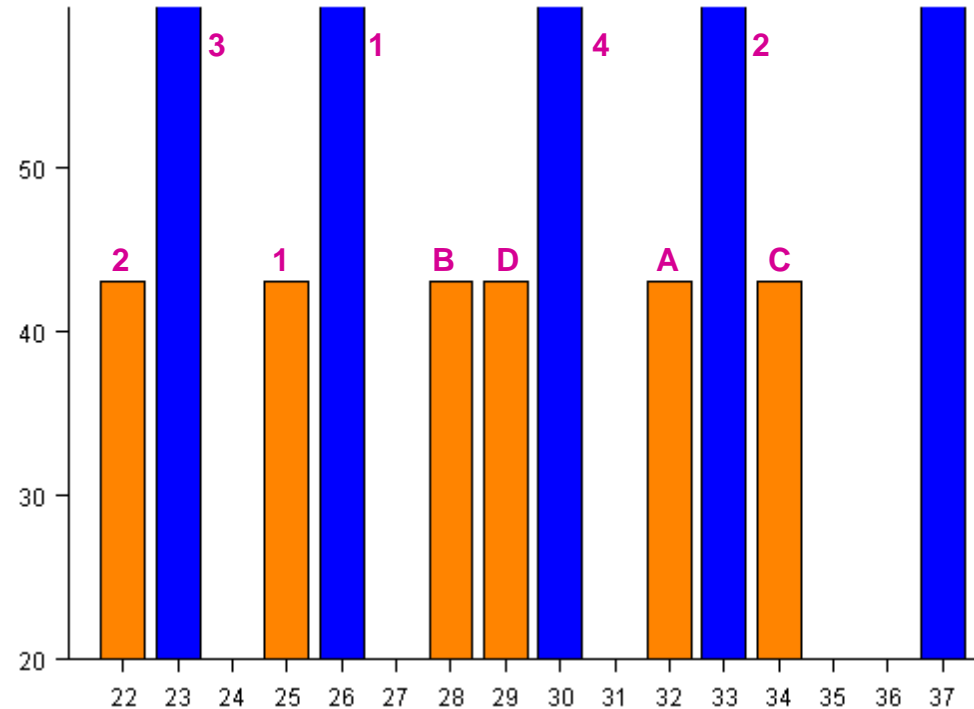
W: 21-68 Black

- Note - there is more than One Wideband Type - Sudbury needs Group-E
- If you go too Wideband - Gain is compromised



Aerials - London

Tx Power,
dBW



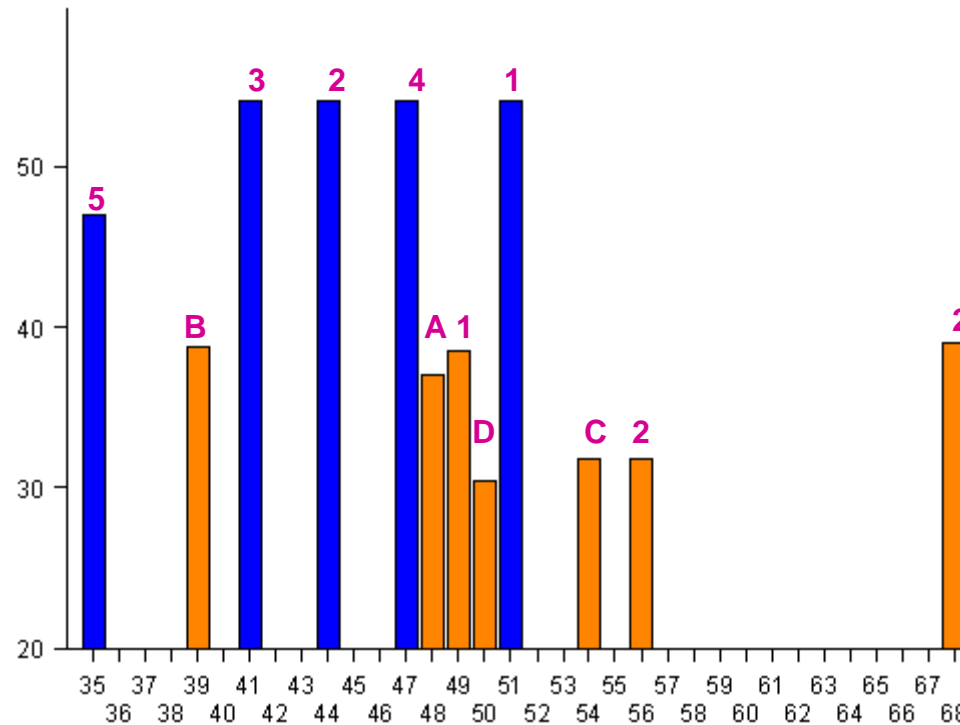
Analogue = Blue
Digital = Orange

- London - Digital Channels are within existing Aerial Group-A
- NB Enhanced Group-A is needed to get Analogue Ch.5
- Raising powers further may start to interfere with Analogue



Aerials - Sudbury

Tx Power, dBW



Analogue = Blue

Digital = Orange

Ch57 reserved for Chelmsford Regional TV!

- Sudbury - Digital Powers are lower relative to Analogue
- Channels go beyond existing Aerial Group-B - need Group E



Tuning In

- **New DTVAs**
 - Pace, Panasonic, Nokia, Grundig/Thomson, Labgear, Daewoo etc
 - (RGB Scart is best interface)
- **Integrated Digital TVs**
 - Take care due to premium price and lack of support
- **ex ITV Digital Boxes - Ok but slow with no support/updates**
- **Caution-1: London/Anglia Diplexers can cut out band edges as well**
- **Caution-2: Modulator Outputs on VCRs, DVDs, Sky Boxes etc often block freqs**
- **Aerials**
 - Beware of general stuff on market stalls!
 - Antiference, Labgear, Maxview ok - But get the right Aerial Group!

BUT AS IT'S FREE IT'S WORTH A GO!



References

- **Freeview** www.freeview.co.uk
- **BBC Digital** www.bbc.co.uk/digital/
- **Digital Television Group (DTG)**
 - www.dtg.org.uk (Better for Postcode searches than Freeview)

- **Independent Television Commission (ITC)**
 - www.itc.org.uk

- **Pace** www.pace.co.uk & www.pacefreetoview.co.uk
- **Antiference** www.antiference.co.uk
- **Digital Spy** www.digitalspy.co.uk (Terrestrial Section)

- **Newsgroups:** uk.tech.digital-tv, uk.tech.broadcast